

Remarks

Entry of the amendments, reconsideration of the application, as amended, and allowance of all pending claims are respectfully requested. Claims 13, 14, 16-19, 21-25, 27-29, 31, 32, 34-36 are now pending.

Claim amendments are presented herewith in accordance with the Notice entitled "Amendments in a Revised Format Now Permitted" and published in the Official Gazette on February 25, 2003. Applicants note that the subject matter of claims 30 & 33 is incorporated into the independent claims from which they depend (i.e., claims 29 & 32, respectively) by the amendments presented herewith, and thus, claims 30 & 33 are canceled herein. Similar subject matter is added to independent claims 13, 18, 23, 24 & 35 in the amendments presented herewith. Support for the amendments to claims 13, 18, 23, 24, 29, 32 & 35 can be found throughout the application as filed, and in particular at page 6, lines 10-16.

The Office Action objected to claim 30 because of an alleged informality regarding the phrase "wherein the determining completion." As noted above, claim 30 is canceled herein, thus rendering this objection moot.

Substantively, the Office Action rejected claims 13, 14, 16-19, 21-25 & 27-35 under 35 U.S.C. 103(a) as being unpatentable over Trugman (U.S. Patent No. 5,887,141) in view of Benayoun et al. (U.S. Patent No. 5,771,227; hereinafter, "Benayoun"). Applicants respectfully, but most strenuously, traverse this rejection to any extent deemed applicable to the claims presented herewith.

An "obviousness" determination requires an evaluation of whether the prior art taken as a whole would suggest the claimed invention taken as a whole to one of ordinary skill in the art. In evaluating claimed subject matter as a whole, the Federal Circuit has expressly mandated that functional claim language be considered in evaluating a claim relative to the prior art. Applicants respectfully submit that the application of these standards to the independent claims

presented herewith leads to the conclusion that the recited subject matter would not have been obvious to one of ordinary skill in the art based on the applied patents.

Applicants recite a technique for dynamically changing message flow (e.g., claim 13). The technique includes dynamically changing a network of processes, while one or more messages of a plurality of messages are being processed in the network. The technique further includes determining completion of a problem associated with one or more messages of the plurality of messages, although said network has changed, and although the one or more messages have dynamically changed in number in response to the dynamic change in the network. The determining comprises checking a data structure to determine whether the problem is completed.

In another aspect of applicants' invention (e.g., claim 29), a technique for facilitating processing of transactions is recited to include dynamically changing a network of processes used in processing a plurality of messages of a transaction, the transaction having associated therewith a dynamic number of messages. The technique further includes determining completion of the transaction, even though the network used in processing the plurality of messages of the transaction is dynamically changed, and even though the number of messages of the transaction dynamically changes during processing the plurality of messages.

Applicants' above-summarized invention thus includes, in part, determining completion of a problem associated with one or more messages although the one or more messages have dynamically changed in response to the dynamic change in the network. Applicants respectfully submit that this feature of the claimed invention is not taught, suggested or implied by Trugman or Benayoun, alone or in combination.

Trugman discloses a system for efficiently distributing work from a server to remote/mobile nodes by providing a hierarchy of Session Work Objects (SWOs). Events in Trugman can be assigned to sessions, nodes and users via a hierarchy of SWOs (see Col. 2, lines 51-58 and FIG. 1 thereof). The SWO work distribution system of Trugman is very different from applicants' invention, which recites, in part, determining completion of a problem

associated with one or more messages, although the network has changed, and even though the one or more messages have dynamically changed in number in response to the dynamic change in the network. In Trugman, a node (or session or user) sends an outgoing message (i.e., command) to cause an event associated with an SWO to occur, and an incoming message returns to that node with a result, which indicates that the event has been completed (see FIG. 2 and Col. 6, lines 12-32 thereof). Thus, a node in Trugman expects one returned message to indicate the completion of the event (or completion of a problem). If this one returned message were to dynamically change in number during processing so that, for example, three messages were returned, Trugman's node would have to be altered to be able to know that three, rather than one returned message, indicates the completion of the event (or problem). This type of node alteration is advantageously avoided in the present invention, which allows the determination of the completion of a problem (by checking a data structure), even though the one or more messages associated with the problem have dynamically changed in number.

Relative to determining completion of a problem associated with one or more messages of the plurality of messages, the Office Action cited col. 6, lines 41-44, col. 7, lines 13-18, and col. 8, lines 21-35 of Trugman. The reference in column 6 states that SWOs are created for tasks to be completed at nodes and/or servers. Although this cited section refers to the completion of tasks, applicants respectfully submit that a teaching about merely the execution or the completion of a task (or event, or SWO) is not relevant to applicants' argument. Instead, applicants wish to emphasize the conditions under which the determining of the completion of a problem takes place, and note that Trugman is silent as to describing or suggesting the manner in which the completion of its tasks can be determined. More particularly, the cited section is silent as to determining the completion of a problem even though the number of the one or more messages associated with the problem has dynamically changed, as is recited in the claims presented herewith. Further, the column 7 reference describes the timing of event execution (i.e., before, during or after a communication session with a node has been established). Applicants again note that this referenced section does not discuss or suggest determining the completion of an event even though associated messages have dynamically changed in number. Still further, the column 8 reference describes defining events to automate workflow and maintenance activities and tagging the events for execution at certain times. Again, this cited section includes no

teaching or suggestion of one or messages dynamically changed, as recited in the claims presented herewith.

Applicants also note that the Office Action cited col. 5, lines 28-35 of Trugman relative to claims 30 & 33. These claims have been canceled herein, but their subject matter has been incorporated into independent claims 29 & 32, respectively. As such, applicants submit that this column 5 reference does not teach or suggest determining completion of the transaction even though the number of messages of the transaction changes during processing, as recited in, for example, claim 29. This cited section states that SWOs link events to sessions/nodes/users, and that SWOs are units of work executed during a session. There is simply no discussion in this section of a number of messages of a transaction changing during processing, let alone of determining completion of a transaction even though such a change in number of messages occurs.

For all of the reasons stated above, applicants respectfully submit that Trugman fails to teach or suggest determining completion of a problem associated with one or messages, even though the one or more messages have dynamically changed in response to the dynamic change in the network. Further, applicants submit that Benayoun does not overcome this deficiency of Trugman as applied to applicants' invention.

Benayoun is directed to the routing of messages in a multi-node data communication network. In particular, Benayoun describes a technique for routing messages through a network that is reconfigurable (see Col. 2, lines 17-24). The routing technique disclosed in Benayoun stands in contrast to the present invention, as amended herein. The technique in Benayoun includes adding nodes or terminals to a network configuration, but is not directed to a number of messages changing in response to a network reconfiguration. Benayoun is simply silent as to such a change in the number of messages, let alone determining completion of a problem associated with one or more messages, even though the one or more messages have dynamically changed in number in response to the dynamic change in the network, as recited in the claims presented herewith. Benayoun is directed to a technique for routing per se, not to a technique for managing an aggregation of messages.

The Office Action cited col. 1, lines 59-63 as disclosing a network wherein the nodes can dynamically change transparently to the functioning of the network. Although this section of Benayoun describes a dynamic change to the network, applicants respectfully submit that this reference does not overcome the above-described deficiency regarding the dynamic change in the number of the one or more messages.

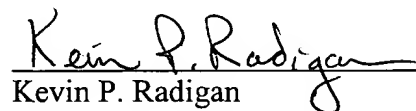
Based on the foregoing, applicants respectfully submit that Benayoun, like Trugman, fails to teach or suggest the determining completion of a problem, even though the number of messages in the one or more messages has dynamically changed in response to the dynamic change in the network.

For all the above reasons, applicants respectfully submit that independent claims 13, 18, 23, 24, 29, 32 & 35 are patentable over the combination cited by the Office Action. Further, the dependent claims are believed patentable for the same reasons as the independent claims from which they directly or ultimately depend, as well as for their own additional characterizations. For example, applicants add herewith a new dependent claim 36, which further characterizes the checking of the data structure as comprising checking results associated with the problem, wherein the results dynamically change in number in response to the dynamic change in the network. As noted above, in Trugman, completion of a task (or event or SWO) is determined when the node receives the result of the task. This determination of the completion of the task is not described or suggested as being dependent on the checking of a data structure for results associated with a problem, let alone dependent on checking a data structure for such results, wherein the results dynamically change in number in response to a network change. Further, Benayoun fails to overcome this deficiency as applied to the present invention. Benayoun also does not teach or suggest checking of a data structure for such dynamically changing results.

Thus, for the reasons stated above, applicants respectfully submit that the dependent claims presented herewith patentably distinguish over the applied art.

Should the Examiner wish to discuss this case further with applicants' attorney, the Examiner is invited to telephone their below-listed representative.

Respectfully submitted,


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